IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Patent Claims

Claims 1-2 (canceled)

3. (currently amended) A process ~~Process~~ according to Claim ~~2~~ 1 [[2]], wherein ~~thereby characterized, that~~ it involves chill molding or chill casting.

4. (currently amended) A ~~Use of a crankshaft according to Claim 1 for a~~ diesel powered vehicle, wherein the diesel engine includes a crankshaft with combined drive gear wheel, wherein both the crankshaft and drive gear wheel are cast as one piece, wherein crankshaft and gear wheel exhibit differential hardening, wherein both are manufactured from tempered ductile iron (ADI), wherein the hardness of the gear wheel is further increased by local differential thermal treatment during ADI heat treatment and/or by peening, and wherein the friction wear resistance of the gear teeth is increased by application of carbide containing coatings (CADI).

5. (new) A crankshaft with combined drive gear wheel, wherein both crankshaft and drive gear wheel are cast as one piece, wherein crankshaft and gear wheel exhibit differential hardening,
wherein both are manufactured from tempered ductile iron (ADI), wherein the hardness of the gear wheel is further increased by local differential thermal treatment during ADI heat treatment and/or by peening, and wherein the friction wear resistance of the gear teeth is increased by application of carbide containing coatings (CADI).

6. (new) A process for manufacturing a crankshaft with combined drive gear wheel, wherein both crankshaft and drive gear wheel are cast as one piece,

wherein a base alloy suitable for tempered ductile iron (ADI) is employed as casting material and heat treated, wherein the heat treatment is controlled locally differentially such that locally the hardness is further increased, and/or

wherein the durability of the gear wheel is locally increased by peening,

and wherein the friction wear resistance of the teeth of the gear wheel is increased by application of carbide containing coatings.